

common lobster, is probably a *thelycum* or *receptaculum seminis*. It resembles that of the lobster\* in general form, but differs a little in the two species. In *Th. zaleucus* the posterior unpaired lobe (no doubt the "triangular pectoral plate" of Willemoes-Suhm's account) is relatively large and its anterior angle is acute, while the anterior paired lobes are depressed in the middle line; in *Th. japonicus* the posterior lobe is smaller, its anterior angle is obtuse, and the anterior lobes are elevated in the middle. It is possible, however, that these differences may not be specific, but may be due to differing degrees of maturity.

XXVIII.—*Descriptions of new Species of Mollusca.*  
By G. B. SOWERBY, F.L.S.

[Plate III.]

THE eight Japanese species described in this paper, together with the six appearing in my last (Ann. & Mag. Nat. Hist., June 1913), were collected and sent over by Mr. Y. Hirase, whose diligent researches have added much to our knowledge of the molluscan fauna of Japan. He has also recently built and furnished an excellent conchological museum at Kyoto.

*Glyphostoma glabriplicatum*, sp. n. (Pl. III. fig. 1.)

Testa elongata, albida, solidiuscula; spira elato-turrita; anfractus 9, convexi, gradati, spiraliter subtilissime striati, longitudinaliter plicati; plicis 8, erassiuseculis, rotundatis, glabratiss; anfractus ultimus brevis, infra contractus, brevirostratus; apertura brevula; peristoma ad marginem acutum, extus crassivaricosum, intus plicatum; sinus posticus arenatus, mediocriter profundus, latiusculus; columella rectiuscula, leviter plicata; canalis brevis, infra expansus.

Long. 14, maj. diam. 4 mm.

*Hab.* Osumi, Japan.

Shell with a short body-whorl and high turrited spire; the outer lip thickened by a strong varix, edge acute, interior of the aperture on both sides closely plicate.

In its general aspect this shell is very like *G. aliciae*

\* Calman, "Crustacea," Lankester's 'Treatise on Zoology,' 1909, p. 291, fig. 169.

(Melvill and Standen), from Lifn, but it is much smoother, the spiral striae being very fine and close.

*Drillia solicitata*, sp. n. (Pl. III. fig. 2.)

Testa elongata, solidiuscula, pallide carnea, dilute fulvo fasciata; anfractus 7, superne glabri, leviter concavi, infra convexi, oblique plicati; anfractus ultimus spiram fere aequans, supra breviter oblique plicatus, deinde laevis, infra attenuatus, vix rostratus; apertura oblonga, mediocriter lata, intus laevis; peristoma acutum, arcuatum; sinus profundus, intus rotunde expansus; canalis latus, brevissimus; columella leviter arcuata, supra callosa.

Long. 14, maj. diam.  $5\frac{1}{2}$  mm.

*Hab.* Goto, Japan.

A pale pink shell, with light fulvous bands; it is chiefly remarkable for the character of the sinus, which is rather narrow at the entrance and then roundly expanded.

*Mangilia osumiensis*, sp. n. (Pl. III. fig. 3.)

Testa fusiformis, sordide albida, obscure luteo fasciata; spira clata, acuta; anfractus 7, convexiusculi, spiraliter densissime striati, longitudinaliter plicati; plicis 8, rectiusculis vel leviter obliquis, crassiusculis; anfractus ultimus spiram superans, supra convexus, infra attenuatus; apertura oblonga, mediocriter lata; peristoma acutum; sinus brevissimus; canalis latiusculis, curtus.

Long.  $4\frac{1}{2}$ , maj. diam. 2 mm.

*Hab.* Osumi, Japan.

A typical *Mangilia*, distinctly spirally striated.

*Cythara quadrilineata*, sp. n. (Pl. III. fig. 4.)

Testa fusiformi-ovata, solidiuscula, albida, lineis 4 pallide fulvis transversim ornata; spira acute conica, leviter convexa; anfractus 5, laeves, plicis paucis glabratiss longitudinaliter instructi; anfractus ultimus longitudinalis  $\frac{2}{3}$  testae aequans, supra convexus, infra attenuatus; apertura angusta; peristoma crassum, intus denticulatum; sinus haud profundus; columella rectiuscula, minute denticulata; canalis brevis, mediocriter latus.

Long. 8, maj. diam.  $3\frac{1}{4}$  mm.

*Hab.* Japan.

A smooth shell without spiral striae, the longitudinal plicae being somewhat distant, and smoothly rounded. The four light fulvous lines crossing the body-whorl seem to be a constant character.

*Clathurella excellens*, sp. n. (Pl. III. fig. 5.)

Testa ovato-turrita, alba, luteo-tincta, fulvo-fusco hic illie panceulata; spira elatiuscula, gradata; anfractus 6, supra angulati, longitudinaliter rugose plicati; plicis 8, nodulosis; anfractus ultimus spiram superans, supra nodose angulatus, infra contractus, breviter rostratus; apertura oblonga, angustiuscula; peristoma crassum, intus denticulatum; sinus posticus mediocriter profundus, rotunde curvatus; columella recta, fere lævis; canalis brevis, antice expansus.

Long. 10, maj. diam. 4 mm.

*Hab.* Osumi, Japan.

A small shell of a striking and somewhat gay character. The nodules on the ribs are quite prominent, mostly of a pale yellow colour, but here and there they are ornamented with conspicuous bright brown blotches, sparingly distributed.

*Clathurella royi*, sp. n. (Pl. III. fig. 6.)

Testa ovato-turrita, crassa, pallide luteo-fulva, ad apicem fusca; spira elatiuscula, subgradata; anfractus 8, primi 2 læves, sequentes convexi, supra angulati, longitudinaliter plicati; plicis crassis, rotundatis, valide nodulosis; anfractus ultimus spiram fere æquans, supra convexus, angulatus, infra contractus, brevisime rostratus; apertura mediocriter angusta; peristoma crassum, intus denticulatum; sinus mediocriter latus et profundus; columella leviter sinuosa, haud denticulata; canalis brevis.

Long. 7, maj. diam. 3 mm.

*Hab.* Osumi, Japan.

A small shell of solid growth, with very stout, strongly nodulous ribs, brown apex. Otherwise the shell is of a light uniform buff-colour.

*Conus optimus*, sp. n. (Pl. III. fig. 7.)

Testa turbinata, crassa, fusca, maculis grandibus albis diversiformibus ornata; spira breviter conica; anfractus angulati, anguste planulati, ad angulum tuberculati; anfractus ultimus ad angulum tuberculis rotundatis mediocriter elevatis subdistantibus coronatus, infra angulum convexiusculus, baltea alba irregulariter interrupta infra medium ornatus, basin versus leviter attenuatus, granulatus; apertura angusta, intus purpurea; peristoma postice breviter sinuata.

Long. 23, maj. diam. 12 mm.

*Hab.* New Caledonia.

The pattern of this shell is rather excentric; there is a large, white, curiously formed blotch proceeding diagonally

from the angle, and just below the middle of the body-whorl an interrupted belt of quaintly formed white markings; these show very prominently against the general plain brown colour of the shell.

I have only seen a single specimen of this species.

*Chrysodomus acutispiratus*, sp. n. (Pl. III. fig. 8.)

Testa ovato-acuminata, luteo-albida, pallide fusco-balteata, ubique spiraliter lirata, liris angustis, confertis, liris fortioribus majis distantibus interveniens; spira elata acuta, apice papillaris; anfractus 9, primi 2 laeves, leviter obliqui, sequentes 4, angulatim convexi, longitudinaliter nodoso-plicati, deinde regulariter convexi; anfractus ultimus spiram superans, ventricosus infra medium valde contractus, breviter contorto rostratus; apertura ovata, intus laevis, fusco-tineta; peristoma tenue, arcuatum; columella arcuata, infra medium complicata, sinistrorum reflexa; canalis brevis, leviter reflexus.

Long. 29, maj. diam. 13 mm.

*Hab.* Iyo, Inland Sea, Japan.

This shell is remarkable for its long acute spire, the spiral, close, fine liræ, with stronger ones at regular intervals, and the rough plicæ on the upper whorls.

*Mesalia exilis*, sp. n. (Pl. III. fig. 9.)

Testa elongato-turrita, albida, maculis parvis pallide lutescente conspersa, ubique spiraliter tenuiter lirata; spira prælonga, acuta; anfractus 14, leviter convexi, oblique anguste plicati, plicis granulosis; sutura anguste canaliculata; anfractus ultimus  $\frac{1}{3}$  longitudinalis testæ æquans, convexus, plicis obliquis evanidis; apertura semilunata; peristoma tenue; columella sinistrorum reflexa; basis haud canaliculata, sinu latiuseulo emarginato.

Long. 47, maj. diam.  $13\frac{1}{2}$  mm.

*Hab.* West Australia.

The actual generic position of this remarkable shell is uncertain, but I place it provisionally in *Mesalia* on account of the characteristic basal sinus.

*Mitra marciae*, sp. n. (Pl. III. fig. 10.)

Testa ovato-fusiformis, albida, lineis lacteis, vivide fusco interruptis ornata; spira mediocriter elata, acuta; anfractus 8, convexi, longitudinaliter ubique plicata, supra pallide luteo tineti, linea fusca luteo interrupta ornata; anfractus ultimus  $\frac{2}{3}$  longitudinalis testæ æquans, convexiusculus, infra leviter attenuatus, ad medium, supra, et infra hilariter lineatus; apertura oblonga, intus fusco fasciata; columella triplicata.

Long. 16, maj. diam. 6 mm.

*Hab.* Cyo-Callamianes, Philippines (*Hidalgo*).

A beautiful little shell; the lines crossing it are bright brown between the ribs and yellow on the top; the anterior portion of the shell is more densely marked with brown lines.

I have only seen one specimen, which was sent to me by Señor J. G. Hidalgo, of Madrid.

*Mitra hidalgoi*, sp. n. (Pl. III. fig. 11.)

Testa gracillime elongata, albida, hic illuc sparsim flavo tineta; spira elata, acutissima; anfractus 9, primi 2 læves, pellucens, sequentes tricarinati, inter carinas longitudinaliter foveolatim multisulcata; anfractus ultimus  $\frac{2}{3}$  longitudinalis testæ aequans, levissime convexus, carinis circiter 12 instructus, basin versus attenuatus; apertura angusta; peristoma tenue, serratum; columella triplicata.

Long. 19, maj. diam.  $5\frac{1}{2}$  mm.

*Hab.* Philippines (*Hidalgo*).

A shell of graceful slender form, with prominent spiral carinæ, between which are numerous short excavated sulci directed longitudinally.

Like the last species, this is the only specimen I have seen, and it was also sent me by Señor Hidalgo.

*Mitra sculptispira*, sp. n. (Pl. III. fig. 12.)

Testa ovato-fusiformis, solidula, nigro-fusca, baltea unica luteo-fusca ornata; spira conica, mediocriter elata, acuta; anfractus 7, convexi, longitudinaliter plus minusve rugose plicati; sutura impressa; anfractus ultimus lævis,  $\frac{2}{3}$  longitudinalis testæ aequans, supra convexus, supra medium baltea angusta luteo-alba cingulatus, infra leviter attenuatus, oblique sulcatus; apertura angusta; peristoma crassiusculum, lævis, nigro-fusca; columella rectiuscula, triplicata.

Long. 14, maj. diam. 6 mm.

*Hab.* I. Sibuyan, Philippines (*Hidalgo*).

Four specimens of this species to hand. It is a dark brown shell, with a thin band of yellowish white; the body-whorl is smooth, but the upper whorls are more or less rudely plicate; in this respect the specimens vary considerably.

*Tellina euseulpta*, sp. n. (Pl. III. fig. 13.)

Testa ovalis, compressa, albida, concentrico tenuiter dense laminata, radiatim subfiliter sulcata, antice rotundata, postice leviter truncata, leviter flexuosa; umbones acuti, fere centrali, conjuncti; lunula angustissima; ligamentum breviusculum; arcu ligamenti

excavata ; margo dorsalis utrinque declivis ; latus anticus rotundatum, posticus biangulatum ; cardo normalis.  
Diam. antero-post. 26, umbono-marg. 16 mm.

*Hab.* Manila.

A white shell of ordinary form, closely sculptured, with thin concentric lamellæ and radiating striæ.

*Cardita kiiensis*, sp. n. (Pl. III. fig. 14.)

Testa transverse oblongo-ovata, compressiuscula, fulvo-fusca, supra albo picta, versus marginem tenuiter concentrica striata, ubique oblique costata ; costis 12, latiusculis, rotunde convexis, interstitiis subæqualiter latis ; umbones incurvati, approximati, antice locati ; margo dorsalis posticus elongatus, leviter arcuatus, anticus abrupte truncatus, utrinque rotunde convexus, ventralis leviter arcuatus ; cardo normalis ; pagina interna lœvis, alba, ad marginem crenulata.

Diam. umbono-marg. 21, antero-post. 29 mm.

*Hab.* Kii, Japan.

This shell is chiefly remarkable for the extremely anterior position of the umboes, making the radiating ribs unusually oblique.

*Cardita regularis*, sp. n. (Pl. III. fig. 15.)

Testa subtrigonalis, ventricosa, crassa, fusca, radiatim costata ; costis 12, latiusculis, transversim rugose plicatis, interstitiis majis angustis lœvigatis ; umbones obtusi, ante medium locati ; area valvarum antica oblongo-cordiformis, leviter concava, postica elongata, compressa, utrinque rugose striata ; margo dorsalis anticus brevis, valde declivis, posticus elongatus recto declivis ; latus anticus rotundatum, posticus acuminatum, biangulatum. Pagina interna lilaceo-fusco tineta, margine crenulata ; impressiones musculares utrinque ovali, impressi.

Diam. umbono-marg. 30, antero-post. 40, crass. 25 mm.

*Hab.* Gorée, West Africa.

Compared with *C. antiquata*, Linn., the form of this shell is more triangular, umboes more nearly central, radiating ribs more strongly plicate, interstices not so deep. It is further distinguished by the shallow depressions before and behind the umboes.

I have only seen one adult and two young specimens, which were in the collection of the late Monsieur Denaus, with label indicating habitat as above.

## EXPLANATION OF PLATE III.

*Fig.* 1. *Glyphostoma glabriplicatum* (twice nat. size).  
*Fig.* 2. *Drillia solicitata* (twice nat. size).  
*Fig.* 3. *Mangilia osmiaeusis* ( $3\frac{1}{2}$  times nat. size).  
*Fig.* 4. *Cythara quadrilineata* (twice nat. size).  
*Fig.* 5. *Clathurella excellens* (twice nat. size).  
*Fig.* 6. — *royi* ( $2\frac{1}{2}$  times nat. size).  
*Fig.* 7. *Conus optimus* (nat. size).  
*Fig.* 8. *Chrysodonius acutispira* (nat. size).  
*Fig.* 9. *Mesalia exilis* (nat. size).  
*Fig.* 10. *Mitra marcicæ* (twice nat. size).  
*Fig.* 11. — *hidulgoi* ( $1\frac{1}{2}$  times nat. size).  
*Fig.* 12. — *sculptispira* (twice nat. size).  
*Fig.* 13. *Tellina eusculpta* (nat. size).  
*Fig.* 14. *Cardita kiiensis* (nat. size).  
*Fig.* 15. — *regularis* (nat. size).

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## PROCEEDINGS OF LEARNED SOCIETIES.

## GEOLOGICAL SOCIETY.

February 5th, 1913.—Dr. Aubrey Strahan, F.R.S., President, in the Chair.

The following communication was read:—

‘On the Skeleton of *Ornithodesmus latidens*, an Ornithosaur from the Wealden Shales of Atherfield (Isle of Wight).’ By Reginald Walter Hooley, F.G.S.

The bones were obtained from blocks recovered from the sea after being washed from a huge fall of the Wealden Shales. Portions of the skeleton missing in the Atherfield specimens are supplemented by bones in the British Museum (Natural History), No. R/176, upon which the late Prof. H. G. Seeley founded the genus. There are remarkable peculiarities in the skull which isolate it from all known families, such as the presence of a sixth vacuity and a transposition of the jugal and quadratojugal in regard to the supra- and infra-temporal areades. The jugal is excluded from the upper arch, and the jugal and quadratojugal from the lower, which is formed entirely by the quadrate. The orbits are placed far back in the skull, and the quadrate articulation is much in front of them. The occiput is concave. Teeth occur only at the extremity of the long muzzle; they are set close together, and those of the upper jaw interlock with those of the lower jaw. The notarium, the humerus, the decussation of the ulna by the radius, the sternum, and femur all show divergence from other types.